

POLREP No. 12

## **I. Heading**

Date: January 16, 2000  
Subject: Hackberry Pits  
From: OSC Robert M. Ryan, P.E., U. S. EPA Region 6  
To: Director, ERD  
Charles A. Gazda, Chief, RPB, Region 6

## **II. Background**

Site ID#: Z6FR  
FPN: N00023  
Response Authority: OPA  
NPL Status: Non-NPL  
State Notification: LOSCO, LDNR  
Incident Category: Active  
Action Memorandum Status: N/A

CERCLIS No.: N/A  
Delivery Order No.: N/A  
ERNS No.: N/A  
Action Lead: Fund  
Start Date: October 2, 2000  
Completion Date: N/A

## **III. Situation Information:**

### **A. Incident Category: Abandoned Oil Production Facility**

#### **1. Site Location**

Facility 12-E-1001, identified as the Hackberry Pit No. 1, is located in the East Hackberry Oil Field, within the Pete Seay Circle Road (Rd) residential area of Hackberry, Cameron Parish, Louisiana. The pit is located approximately 400 feet (ft.) south of Black Lake Bayou and 0.5 miles west of the Calcasieu Ship Channel. The facility is mapped in the Moss Lake USGS 7.5-minute quadrangle, within Section 37, Township 12 South, Range 10 East. The geographic center of Pit 1 is at Latitude 30° 00' 12" North and Longitude 93° 20' 27" West. The facility is accessible by land only. To reach the site, travel 700 ft. south on Highway 27 from Black Lake Bayou and turn left onto Pete Seay Circle Rd. Travel approximately 1,000-ft. on the north side of Pete Seay Circle Rd. and the pit will be located approximately 40-ft. to the south.

The facility is comprised of a well and seven pits, identified as Pit 1 through Pit 7, that range in size between 23,300 and 39 square ft. All are located within an area of approximately 2-acres. Pit 1, the largest of the seven pits, is the only pit that can be observed from the Pete Seay Circle Rd. Pit 1 has no available freeboard and is encompassed by a clay berm measuring 112 ft. by 208 ft. that is 2 ft. taller than the surrounding landscape. The Pit is approximately 4 ft. 6 inches (in.) in depth to the natural clay bottom. A 6 in. water layer exists on the surface, while the remainder is a heavy sludge. Pit 2 is located approximately 15 ft. south of Pit 1 and measures 11 ft. by 11 ft. The pit is a square recession in the ground that has been lined with boards to prevent cave-ins. Pit 2 is 2.5 ft. deep and is filled with 2 ft. of water. It is interconnected to both Pit 1 and Pit 4 via piping and valves. Approximately 10 ft. west of Pit 2

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is Pit 3, which measures 11 ft. by 9 ft. and is also lined with boards. Pit 3 is 1.5 ft. deep and contains 1 ft. of water. Both Pit 2 and Pit 3 have approximately 6 in. of available freeboard. Pit 4 is located approximately 30 ft. south of Pit 3 and 60 ft. southwest of Pit 2 and measures 102 ft. by 21 ft. It is surrounded by a 1 ft. clay berm and has 2.5 ft. of available freeboard inside. Pit 4 is approximately 5 ft. deep from the top of the clay berm and contains 2.5 ft. of water. Pit 5 is adjacent to the east side of Pit 1 and shares a common clay berm. Pit 5 has 2.5 ft. of available freeboard and measures approximately 62 ft. by 194 ft. The Pit has approximately 1 ft. of water inside. East of Pit 5 is Pit 6. Both share a common clay berm for containment purposes. Pit 6 measures 87 ft. by 52 ft., is empty, and has a full 3 ft. of available freeboard to the top of the clay berm. Pit 7 is located approximately 10 ft. north of the northeast corner of Pit 1 and is interconnected to Pit 1 via pipe. It measures 6 ft. 3 in. square and is approximately 2.5 ft. deep, with 1.5 ft. of this depth containing water. Pit 7 is formed out of concrete and resembles a sump-like structure. The top of the concrete structure is approximately 1 foot taller than the surrounding landscape.

Approximately 20 to 25 wells are located within a 1,000-ft. radius of the facility, but only the Caldwell Well No. 8 (Serial No. 022320) has been linked to the facility by the Louisiana Department of Natural Resources (LDNR). According to records, the initial drilling and operation of this well were permitted to the Union Sulphur Company on March 31, 1939. The last known operator of the well was R-5, Incorporated, who acquired it on June 21, 1974. A summary of the status and type of well identified as associated with the facility is presented in the Well Status Table. Another well is located approximately 20 to 30 ft. south of Pit 5 and is connected to the pit via a pipeline. The well is rudimentarily plugged with a wooden block. LDNR has no known record of the initial drilling nor operation of this particular well.

Unit Petroleum, Incorporated currently operates tank batteries located both northwest and southeast of the pits that are not associated with this facility. The tank batteries appear to be out of service, and there are no indications of their association with the pits. Three active separators, also not believed to be associated with this facility, are located approximately 300-ft. to the east.

<b>WELL STATUS TABLE</b> <b>Hackberry Pit No. 1</b> <b>Operator Code: 4912</b> <b>April 1, 1999</b>				
<b>LOSCO I.D. Number <sup>(1)</sup></b>	<b>Serial Number</b>	<b>Well Name</b>	<b>Status (Based on LDNR Records)</b>	<b>Confirmation <sup>(2)</sup></b>
N/I N/I	022320 UNKNOWN <sup>(3)</sup>	CALDWELL WELL NO. 008 UNKNOWN <sup>(3)</sup>	Orphan Wells (Oil) UNKNOWN <sup>(3)</sup>	CPO CPO
<b>Note:</b> <sup>(1)</sup> Refer to LDNR Records of Communication (ROC) and LOSCO field sheets for specific information on associated wells. <sup>(2)</sup> Information in this column is based upon an interpretation of research data, LDNR records, and communication with field personnel by START for the purpose of justifying the association of the well to the facility. <sup>(3)</sup> An unidentified well plugged with a wooden block located approximately 30 ft. south of Pit 5.  <b>Key:</b> CPO = Confirmed association via proximity to site and identical operators. N/I = No information was available.  <b>Source:</b> Ecology and Environment, Inc., 1999.				

## CONTAINER STATUS TABLE

Hackberry Pit No. 1

12-E-1001

April 1, 1999

Container	Capacity (bbl)	Volume (bbl) <sup>(1)</sup>	Description of Contents	Radiation Monitoring/ Analytical Data <sup>(2)</sup>	Container Condition
Pit 1	20,700	18,280	Thin layer of water/heavy oil sludge underneath 4'-5" depth average	ND for radiation/ 46.17% oil & grease content <sup>3</sup>	Inadequate clay berm/ signs of prior breaching
Pit 2	54	43	Contains mostly water/ Sheen observed	ND for radiation/no analytical	Adequate condition/clay berm
Pit 3	26	17	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
Pit 4	1,900	952	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
Pit 5	8,020	1,480	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
Pit 6	2,410	0	No contents/dry pit	ND for radiation/no analytical	Adequate condition/clay berm
Pit 7	98	74	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
<b>Total Volume =</b>	<b>33,208</b>	<b>20,846</b>	<b>Total Volume of all Petroleum-Based Materials <sup>(3)</sup> = 18,280 bbl</b>		

Note: <sup>(1)</sup> Contents may include oil/water mixture or produced water.

<sup>(2)</sup> "Total Volume of all Petroleum-Based Materials" excludes any contents described as water or sheen on water. This volume calculation is for use in the Threat Ranking Matrix Table.

<sup>(3)</sup> Analytical procured by LDNR. Analysis completed by Laboratory & Analytical Business Services, Inc. on July 21, 1999.

Key: bbl = Barrels.

NA = Unable to gauge contents.

ND = Non-detected above background levels.

Source: Ecology and Environment, Inc., 1999.

## 2. Description of Threat

The facility is situated 400 ft. south of Black Lake Bayou and 0.5 miles west of the Calcasieu River Ship Channel. The pits are located within the city limits of Hackberry Louisiana, and are surrounded by approximately 50 residences within a 1-mile radius of the Hackberry Pit No. 1. Approximately 300 ft. to the north and directly across the Pete Seay Circle Road from Pit 1 are a local boat launch, a bait & tackle store, and a seafood processing plant.

THREAT STATUS TABLE Hackberry Pit No. 1 12-E-1001 April 1, 1999			
Criteria <sup>(1)</sup>	Evaluated Specifications	Possible	Points
Volume	0 Bbl.	0	
	1 Point per 23 bbl.	1-42	
	Greater than 1,000 bbl.	43	
Proximity to Waterways <sup>(2)</sup>			
	Points = $[12 - (\text{distance in ft}/500 \text{ ft})]$ round to nearest whole number.	1-11	
	Over water.	12	
Container Condition			
	Rusty, pitted, corroded, or cracked.	5	
	Top open or holed--Potential overflow from precipitation.	15	
	Product within secondary containment.	20	
	Weeping seeping or holed.	25	
Potential for Dumping			
	Hatches/containers accessible, proximal to roads or transportation.	1-7	
	Containers open, pits, and proximal to roads or transportation.	8	
Accessibility to Wildlife and Persons			
	Limited security features, accessible to persons.	1-11	
	Open pits with oil.	12	
Priority based on points:		None 0-20 Medium 41-60 Low 21-40 High 61-100	High
Note: <sup>(1)</sup> Qualitative interpretation prepared by START based on five criteria deemed most significant in evaluating a potential threat. <sup>(2)</sup> For the purpose of threat evaluation, a waterway is defined as any perennial water body. Key: bbl = Barrels. Ft = Feet (US). Source: Ecology and Environment, Inc., 1999.			

The facility is considered a high threat due to the large volume of petroleum related product located within Pit 1. Since the underflow pipes are inoperable and the release of hydrocarbon pockets are continuing, an oil overflow from Pit 1 is occurring. A high number of residences are in close proximity to the pits and the pits pose both a chemical and physical hazard to children in this neighborhood. The local residents have expressed their concern in signed petitions and letters written to LDNR.

## B. Response Information

### 1. Current Situation

The USACE contractor, IT, continues removal activities at the Hackberry Pit Site.

## **2. Removal Activities to Date:**

START, USACE, and IT demobilized from the site on November 22, 2000 for the Thanksgiving Holiday. Site activities will commence on November 28, 2000.

During the week of December 16, 2000, IT pumped approximately 15,200 gallons of water from Pit 1 and processes it through the water treatment system where it discharged into Black Lake Bayou. Approximately 134,190 gallons (36 trucks) of oily sludge was removed from Pit 1, and transported to US Liquids for fuel blending. Due to inclement weather conditions (rain) on 12/13/00, the site was closed early. On 12/14/00 the carbon from the filtration system was replaced, and the spent carbon was discharged into Pit 1. On 12/15/00 sludge storage box was emptied, and materials disposed of. IT has requested for a confined space entry permit so the box can be decontaminated and removed off site. Approximately 1.3 inches of rain fell at the site throughout the week, which added approximately 16,000 gallons of water to Pit 1. To date approximately 111,800 gallons of water has been treated at discharged to Black Lake Bayou, approximately 96,000 gallons of water has been disposed of at US Liquids, and approximately 296,730 gallons of oily sludge has been removed and transported to US Liquids for fuel blending.

During the week of December 21, 2000, IT removed 189,210 gallons (53 trucks) of oily sludge. On 12/18/00, a stick in Pit #1 damaged the sludge sump pump. The IT crew repaired the sump pump. On, 12/18/00, the dry prime pump would not draw a vacuum to pump the water to be treated. Chris Moreau of IT had the pump replaced. On 12/19/00 a bulldozer was delivered to the site. The bulldozer was used to crowd in the Pit #1. Pit #1 was crowded in, in order to decrease the area of the pit and raise the level of the oily sludge. On 12/21/00 the two sludge storage boxes were decontaminated. There will be no site activities for 12/22/00 through 01/03/00 due to the shutdown for the holidays.

During the week of January 06 2001, IT removed 52,080 gallons (15 trucks) of oily sludge. IT treated 9,800 gallons of water. The water was discharged into Black Lake Bayou. The site received 0.3 inches of rain over the holidays. IT removed 34 end dump trucks of mixed contaminated soil and sludge. Five surface soils samples were collected from the cleared areas (Figure 1) on the east and south sides of the pit. All samples had less than 1% grease and oil. Oil was observed seeping into the southwest pocket of the pit. Removal of clay from the pocket revealed lenses of oil in the clay. Removal of clay from the pocket continued until the water table was reached. Approximately 8 feet of clay was removed. The oily clay was placed in the sludge contaminated soil pile. IT backfilled the resulting 8 ft hole with clay from the surrounding area. Two sludge storage boxes, the sludge sump pump, and the dry prime pump were removed from the site. On 01/03/01 a house adjacent and north west of the site burned down. The fire was observed at 0800. The fire department was notified shortly afterwards. The fire department arrived at 0830 and extinguished the fire.

During the week of January 13 2001, IT removed 2,373 cubic yards (163 Trucks) of contaminated soil. The site received 2.5 inches of rain throughout the week. A backhoe, four filter containers, four scaffolds, a poly-tank and a bulldozer were removed from the site. Another bull dozer was brought on site. H&E was onsite to repair a hydraulic leak on one of the

excavators. James Industrial Contractors came on site to deliver road fill rocks. The rocks were spread along the drive way, where the trucks are loaded. Zee Medical Supplies delivered a fire hydrant and safety kits to the site. On 01/11-12/01 Philips Services was onsite to decontaminate the frac tank. Phillips Services removed 30 bbl of sludge from the frac tank.. Phillips Services transported the sludge to the US Liquids facility in Mermentau, LA.

### **3. Enforcement:**

A Letter of Federal Interest and Intent was sent to Mr. John Hogan, a representative of Austere Oil and Gas, Inc., a potentially responsible party for the Hackberry Pits. Auster Oil and Gas, Inc. has not claimed responsibility of the Hackberry Pits at this time.

### **4. Planned Removal Activities**

Future activities include: the removal of the Pit 1 contents, disposal of the waste in a NOW approved facility, closure of Pit 1 in accordance with Statewide Order 29-B parameters, and the restoration of the original grade of the site.

### **5. Next Steps**

Next steps include: the removal of the Pit 1 contents and disposal of the waste in a NOW approved facility. WESTON will survey the Pit 1 area. The survey would be used to develop an estimate of how much soil will be backfilled in place of the pit.

### **IV. Key Issues:**

None.

### **V. Cost Information**

Cost breakdowns for the Federal Government personnel are not available at this time.

The following are estimated cost breakdowns for the Corps of Engineers Contractor, as of 01/14/01:

Personnel	\$ 169,343
Equipment	\$ 95,932
Material	\$ 86,529
Subcontractor(s)	\$ 405,689
Total	\$ 757,493

### **VI. Attachments:**

HackP12-pic1.jpg	Rocks laid out on the driveway for the trucks.
HackP12-pic2.jpg:	Rainwater collected in the cleared area of Pit #1.

HackP12-pic3.jpg: Frac tank deconned by Phillips Services.

OSC: Robert M. Ryan, P.E.  
START: Robert Castro











